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Case Report

Inflamed Mesenteric Lymphangioma Mimicking an Infiltrative Abdominal Tumor in a 5-Year-Old Girl

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Abstract

Abdominal lymphangiomas are rare benign malformations of the lymphatic system that can mimic more aggressive pathologies when complicated by infection or hemorrhage. We present the case of a 5-year-old female with acute abdominal pain, low-grade fever, and vomiting, whose imaging findings raised concern for an infiltrative mesenchymal tumor. The final diagnosis following surgical resection and histopathologic evaluation was infected mesenteric lymphangioma. This case underscores the diagnostic challenges of lymphangiomas and the importance of combining clinical, imaging, and histological data in pediatric abdominal masses.

Keywords: ***Lymphangioma, Pediatric abdominal mass, Infiltrative tumor, Abdominal imaging, Mesenteric cyst.***

Introduction

Lymphangiomas are congenital malformations of the lymphatic system, frequently seen in the cervicofacial region but rarely in the abdomen. Abdominal lymphangiomas constitute less than 5% of all lymphangiomas and may remain asymptomatic or present with complications like infection, hemorrhage, or bowel obstruction. Imaging may be inconclusive and mimic malignant masses, especially when complicated. Timely surgical intervention and histopathologic analysis are crucial for diagnosis and management.

Case Presentation

A 5-year-old female presented to the pediatric emergency department with a two-day history of severe abdominal pain, vomiting, fatigue, and low-grade fever (37.6°C). Clinical evaluation suggested an acute abdomen. Physical examination revealed abdominal tenderness and guarding in the lower quadrants.

Laboratory tests showed elevated inflammatory markers, including leukocytosis and elevated C-reactive protein (CRP). Initial abdominal ultrasound revealed a multiloculated cystic formation with irregular thick walls and heterogeneous content, measuring 8 cm in diameter in the suprapubic region. Adjacent bowel loops appeared distorted with altered peristalsis. Minimal free fluid and reactive mesenteric lymphadenopathy were noted. Other abdominal organs appeared normal.

Given the suspicious findings, a contrast-enhanced abdominal CT scan was performed. This confirmed a multiloculated cystic mass with thickened, irregular walls (up to 7 mm) occupying the suprapubic region and interposed between bowel loops, some of which appeared compressed and obstructed. There was no clear demarcation between the lesion and the intestinal loops, raising concern for a mesenchymal infiltrative tumor. Additional CT findings included mesenteric fat stranding, reactive mesenteric lymph nodes, and minimal intraperitoneal fluid.

The patient underwent emergency exploratory laparotomy. Intraoperatively, a cystic mass was found tightly adherent to small bowel loops. En bloc resection of the mass along with a 10 cm segment of involved small intestine was performed. The specimen was sent for histopathological evaluation.

Postoperative recovery was uneventful.

Histopathological examination revealed an inflamed mesenteric lymphangioma, confirming the benign nature of the lesion.

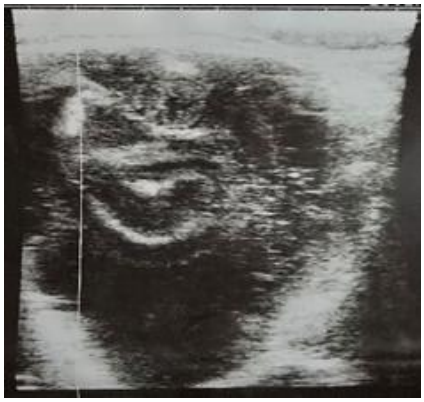
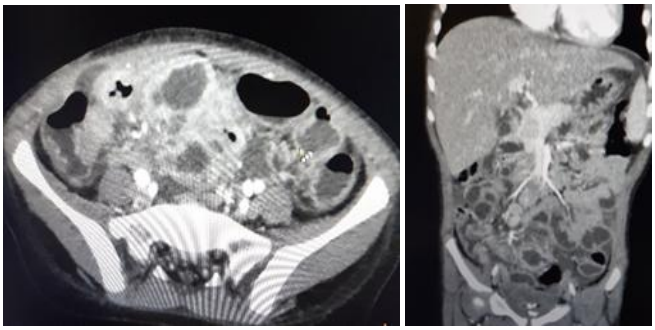


Figure 1: Transabdominal ultrasound image showing a multiloculated cystic mass with heterogeneous echogenic content in the lower abdomen.



(a) (b)

Figure 2: a. Axial/ b. coronal view contrast-enhanced CT demonstrating a thick-walled cystic lesion with mass effect on adjacent bowel loops.

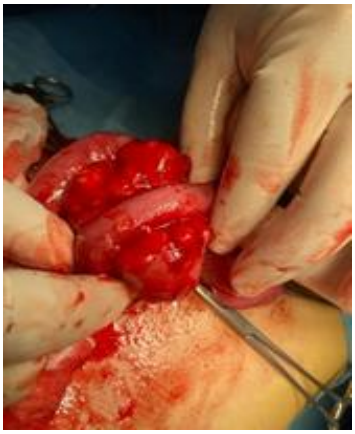


Figure 3. Intraoperative image of the excised cystic lesion adherent to small intestine.

Discussion

Abdominal lymphangiomas are uncommon and can present diagnostic dilemmas due to their non-specific imaging characteristics, particularly when inflamed. Infection and hemorrhage can obscure typical features and simulate malignant processes, such as sarcomas or desmoid tumors.

Ultrasound remains a useful initial modality but is operator-dependent. CT and MRI offer better characterization, particularly in complex or large lesions. In our case, the absence of a clear plane between the lesion and bowel loops on imaging suggested infiltration, contributing to misdiagnosis.

Definitive diagnosis requires histologic confirmation. Surgical excision is the treatment of choice, with prognosis generally favorable if complete resection is achieved.

Conclusion

Infected abdominal lymphangioma, though rare, should be included in the differential diagnosis of pediatric abdominal masses with atypical imaging findings. Awareness of its potential to mimic malignant tumors is essential for accurate diagnosis and management.

Declarations

Ethics Approval and Consent to Participate

This case report was conducted in accordance with the ethical standards of the institutional research committee at the University Hospital Center "Mother Teresa", Tirana, Albania. Ethical approval for individual case reports is not required by our institution. Informed consent was obtained from the patient's legal guardians for participation and publication.

Consent for Publication

Written informed consent was obtained from the patient's legal guardians for publication of this case report and any accompanying images.

Availability of Data and Material

All data generated or analyzed during this study are included in this published article. Additional information is available from the corresponding author on reasonable request.

Conflict of Interests

The authors declare that they have no conflict of interests.

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Authors' Contributions

Eltona Malo: Performed and interpreted the radiologic imaging, drafted and revised the manuscript.
Suela Cinari: Contributed to the clinical description, and provided critical manuscript revisions.
Saimir Heta: Managed the surgical intervent.

All authors read and appro ved the final manuscript.

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